

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (Canceled).

1 2. (Canceled).

1 3 (Canceled).

1 4. (Canceled).

1 5. (Canceled).

1 6. (Canceled).

1 7. (Canceled).

1 8. (Currently Amended) An apparatus for converting a first input video signal
2 having a first number of bits into a second video signal having a second
3 number of bits that is smaller than first number of bits, for displaying an
4 image based on the input video signal comprising:
5 an error detector to generate error data in response at least to a
6 data portion of lower significant bits of the first number of bits of the first
7 input video signal, the lower significant bits corresponding to a difference
8 between the first and the second number of bits, the error data being
9 obtained by multiplying the data portion by predetermined error diffusion
10 coefficients according to pixel dots that surround a pixel dot composed of
11 R(red)-, G(green)- and B(blue)-signal components of the first input video
12 signal, at least one of the number of bits of the error diffusion coefficients
13 for one of the R-, G- and B-signal components being different from the

14 other number of bits of the error diffusion coefficients for the other signal
15 components, the error diffusion coefficients being different from each
16 other for the signal components for which the number of bits of the error
17 diffusion coefficients is the same each other; and
18 an adder to add the generated error data to the first input video
19 signal, thus converting the first input video signal into the second video
20 signal.

1 9. (Canceled).

1 10. (Canceled).

1 11. (Canceled).

1 12. (Canceled).

1 13. (Canceled).

1 14. (Canceled).

1 15. (Canceled).

1 16. (Canceled).

1 17. (Canceled).

1 18. (Canceled).

1 19. (Canceled).

1 20. (Canceled).

1 21. (Canceled).

1 22. (Original) An apparatus of displaying an image based on an input video
2 signal comprising:

3 a first processor to apply reverse-gamma correction to an input
4 first video signal having a first number of bits, the reverse-gamma
5 corrector having reverse-gamma correction characteristics representing a
6 relationship between an input gradation level and an output gradation
7 level, the characteristics being composed of a straight line having a
8 gradient $1/t$ ($t \geq 1$) from an input gradation level zero to a predetermined
9 input gradation level, the straight line being followed by a curve at the
10 predetermined input gradation level; and

11 a second processor to convert the first input video signal into a
12 second video signal having a second number of bits smaller than the first
13 number of bits, by generating error data in response at least to a data
14 portion of lower significant bits "n" ($t = 2^n$) of the first number of bits of the
15 first input video signal, if "n" including decimal places, the decimal places
16 being rounded down, the lower significant bits corresponding to a
17 difference between the first and the second number of bits, the error data
18 being obtained by multiplying the data portion by predetermined error
19 diffusion coefficients according to pixel dots that surround a pixel dot
20 composed of R(red)-, G(green)- and B(blue)-signal components of the
21 first input video signal, the generated error data being added to the first
22 input video signal.

1 23. (New) A video signal processing circuit to process a video signal to be
2 input to a display apparatus comprising:

3 a color saturation depression control signal generator to generate
4 a color saturation depression control signal to be used to vary a color
5 saturation depression amount to be used to decrease a color saturation
6 level of the video signal;

7 a color saturation depression amount generator to generate a
8 triangular shape signal representing the color saturation depression
9 amount, based on the color saturation depression control signal; and
10 a color saturation level decreasing unit to decrease the color
11 saturation level of the video signal by subtracting the triangular shape
12 signal from a color saturation level in a predetermined color saturation
13 level range of the video signal.

1 24. (New) The video signal processing circuit according to claim 23 further
2 comprising a gradation level detector to detect a gradation level of the
3 input video signal, wherein the color saturation depression control signal
4 generator generates the color saturation depression control signal when
5 the gradation level detected by the gradation level detector is within a
6 predetermined gradation level range.

1 25. (New) The video signal processing circuit according to claim 24, wherein
2 the color saturation depression control signal generator generates a
3 larger color saturation depression control signal as the gradation level
4 detected by the gradation level detector becomes lower in the
5 predetermined gradation level range.

1 26. (New) The video signal processing circuit according to claim 24, wherein
2 the predetermined gradation level range is a low gradation level range
3 from a gradation level zero to a predetermined gradation level, and the
4 predetermined color saturation level range is a low color saturation level
5 range from a color saturation level zero to a predetermined color
6 saturation level.

1 27. (New) A video signal processing method of processing a video signal to
2 be input to a display apparatus, comprising the steps of:

3 generating a color saturation depression control signal to be used
4 to vary a color saturation depression amount to be used to decrease a
5 color saturation level of the video signal;
6 generating a triangular shape signal representing the color
7 saturation depression amount, based on the color saturation depression
8 control signal; and
9 decreasing the color saturation level of the video signal by
10 subtracting the triangular shape signal from a color saturation level in a
11 predetermined color saturation level range of the video signal.

1 28. (New) The video signal processing method according to claim 27 further
2 comprising the step of detecting a gradation level of the input video
3 signal, wherein the color saturation depression control signal is generated
4 when the gradation level thus detected is within a predetermined
5 gradation level range.

1 29. (New) The video signal processing method according to claim 28,
2 wherein a larger color saturation depression control signal is generated
3 as the gradation level thus detected becomes lower in the predetermined
4 gradation level range.

1 30. (New) The video signal processing method according to claim 28,
2 wherein the predetermined gradation level range is a low gradation level
3 range from a gradation level zero to a predetermined gradation level, and
4 the predetermined color saturation level range is a low color saturation
5 level range from a color saturation level zero to a predetermined color
6 saturation level.